A Longitudinal Analysis of Clinical Questions Asked at Professor Rounds

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Clinical questions are frequently encountered at educational conferences. Most of these queries can be answered using electronic and print medical knowledge resources available through the library. After 9 years of collecting data, these questions and their answering resources were longitudinally analyzed.

Background

Professor Rounds is a biweekly educational conference in the Department of Pediatrics at the University of Vermont Children's Hospital at Fletcher Allen Health Care.

Each conference highlights a general pediatric, PICU, NICU, or outpatient case presentation followed by a didactic session. It is well attended by:

- Residents
- Medical students
- Full-time faculty
- Community preceptors
- Clinical informationist

The informationist is a welcomed and respected participant at this educational conference. She joins the group to actively listen, record pertinent patient details, and gather questions that arise during the case presentations and discussions.

These questions may be direct requests for information or they may be queries embedded in the discussions that she recognizes as an information need.

Back at the library, she searches the literature for answers to the questions and returns her findings electronically to the chief resident, requestor, and/or conference presenter.

Objectives

- To longitudinally analyze the clinical questions asked at Pediatric Professor Rounds
- To describe the sources of answers for these questions

Materials & Methods

A retrospective review was performed of literature searches conducted for clinical questions asked at Professor Rounds between two time periods:

- November 2003 – February 2008
- March 2008 – December 2012

All literature searches were documented on a dedicated form created by the Dana Medical Library Reference Dept for the purpose of capturing the details of literature search strategies and their results.

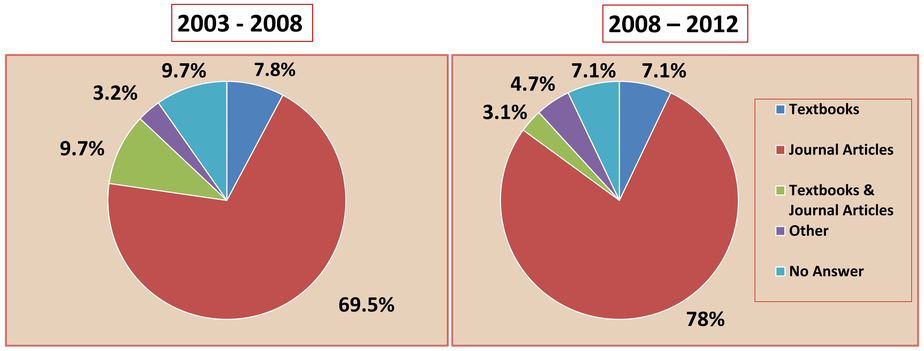
Results

281 clinical questions were reviewed

154 (2003-2008) + 127 (2008-2012)

Question Type	2003-2008 (n = 154) n (%)	2008-2012 (n = 127) n (%)	x^2 test p-value
Received *(direct requests for information)*	96 (62%)	61(48%)	0.02
Perceived *(queries embedded in case presentations or discussions)*	58 (38%)	66 (52%)	
Background *(ask for general knowledge about a disorder, treatment, or test)*	111 (72%)	89 (70%)	0.71
Foreground *(ask for specific knowledge that will influence patient management)*	43 (28%)	38 (30%)	

Medical Knowledge Information Resources



Additional Findings:

Information Resources	2003-2008 (n = 154) % of questions	2009-2012 (n = 127) % of questions	x^2 test p-value
Medline consulted	98.1%	96.9%	0.52
EBM consulted	13.0%	4.7%	0.02
EBM answered	1.9%	1.6%	0.81
Google consulted	3.9%	5.5%	0.52
Google answered	1.9%	3.9%	0.32
Print Reference Textbook consulted	3.2%	3.1%	0.96
Print Reference Textbook answered	1.3%	0.8%	0.68

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Results

1. A **statistically significant increase** in number of "perceived questions" along with a corresponding **significant decrease** in "received questions" was observed (***chi-square test, p-value=0.02***)
2. "**Medical Knowledge Information Resources**" charts look very similar over the two time periods. A ***chi-square goodness of fit test*** was performed to look at the similarity in overall proportions of answer types between the two time periods, and yielded a **non-significant** result (**p-value=0.066**).
3. There was a **statistically significant decrease** in number of "**EBM Consulted**" information resources (**chi-square test, p-value=0.02**).
4. % of questions with "**No Answer**" dropped from **9.7%** (2003-2008) to **7.1%** (2008-2012).

Conclusions

A **Longitudinal Analysis** of literature searches conducted for clinical questions asked at Pediatric Professor Rounds between two time periods revealed a statistically significant change in two areas:

- ***Increase*** *in number of "**perceived questions**" with a corresponding **decease** in number of "**received questions**"*
- ***Decrease*** *in number of "**EBM Consulted**" information resources*

Implications

- The frequent attendance of a skilled and seasoned **clinical informationist** appears to have a **positive impact** on retrieving and answering "**perceived questions**" at this educational conference that would otherwise have gone unnoticed or unanswered.
- In this study, **Medline** was the first-line answering resource used for **98% of questions**. It appears that **Medline** is now providing **more EBM literature** to answer clinical questions asked at Prof Rounds, thus eliminating the need to proceed with more dedicated EBM databases.
- Although the drop in percentage of questions with "**No Answer**" may not be statistically significant, this decrease is certainly a **desirable trend**.